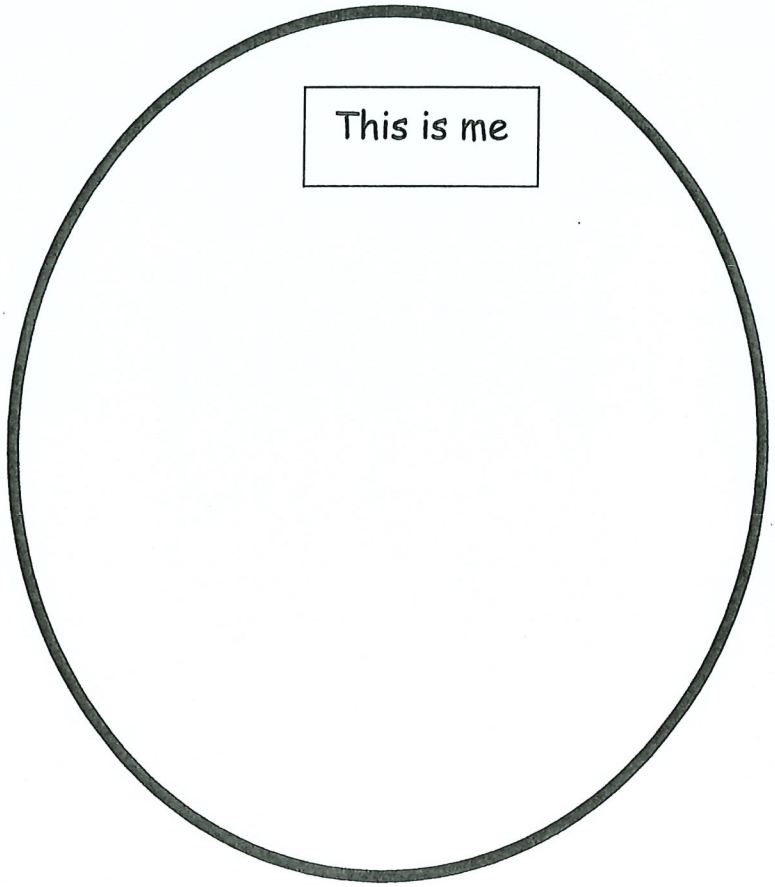
Year 1 Home Learning Booklet 2

This is me



Name:

Diary

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Monday	
Tuesday	
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Friday	

Egg Parachutes

STEM Activity

ACTIVITY 5 | EGG PARACHUTE

STEM Learning Objectives:

Science:
Explore falling objects and the effects of air resistance.

Technology:
Engage in an iterative process of designing and making.

Engineering:
Design, make, test and improve a product.

Maths:
Measure time; compare duration of events.

Can you spot any hazards? How can you reduce the risks?

WHAT YOU NEED:

Materials:
- Large piece of thin material, e.g. broken umbrella with the spokes removed, bin bag, part of an old lightweight raincoat
- Plenty of packaging material, e.g. bubble wrap, packaging foam, cotton wool, egg box, yogurt pot, foam cup
- Thin string
- A hard boiled egg
- A raw egg

Tools:
- Scissors
- Transparent sticky tape
- Stopwatch

WHAT YOU DO:

The aim is to construct a parachute to allow an egg to be dropped out of an upstairs window onto a hard surface without it breaking. Here are some suggestions:

1. Tie four or more strings near the corners or edges of the piece of thin material so that it will act as a parachute.
2. Use the hard boiled egg initially. Package it well, particularly underneath, to cushion the impact when it lands.
3. Attach the other end of the strings to the egg package or basket without getting the strings tangled up!

Ask an adult to hold the parachute by the middle, with the egg package hanging down, drop it out of an upstairs window onto hard ground (e.g. concrete). Time the descent of the egg and then check whether it has broken.

Modify and improve your design as required; for example you could make a larger parachute to slow the egg down more (time the descent to see if this has increased). You could change the number of strings or re-position them to improve your parachute, and/or use more packaging underneath the egg.

Once you are happy with your design, place the raw egg in the package instead of the hard boiled egg. Once it has descended, check whether the raw egg has broken.

STEM Explanation:

The egg and parachute are pulled downwards by gravity.

As they move down the air pushes against them.

The parachute is relatively large so the air resistance gives rise to an upward pull, slowing down the descent of the egg.

The egg must be packaged well to absorb and cushion the impact when it hits the ground.

To prevent the egg from breaking, you can try increasing the air resistance, cushioning the egg better, or both.

Draw and annotate your parachute here:

What was the result of your first test?

Explain how you improved or refined your design:

Core Movements

Work through these stretching activities every day and fill in your fitness log. Ask your Parent or Guardian to sign off your activity.

Bicycle Kick

1

Lay flat on your back with your arms and hands straight and touching the floor.
Copy the motion of being on a bicycle.

Lunging

2

Stand with your legs together and then lunge forward until one leg is right out in front of you.

Bend your knee and flex your hip so your rear leg is almost in contact with the floor.

Finally, return to your starting position.

Scissor Kick

3

Lie on your side with one arm stretched out and the other supporting your weight on the floor. Have your legs stretched out and toes pointed. Slowly lift your leg as high as you can lift it and hold for 5 seconds before gradually lowering to original position.

Toe Touch

4

Keep feet and legs together. Arch your back and stretch your arms and hands to reach and touch your toes whilst keeping your legs straight. Hold for 5 seconds and slowly go back to standing position.

Day	Number of Reps	Signed

Your Favourite Sport

Do you play a sport for school? Or as part of a club outside of a school? Do you watch a sport on TV or live sporting events? What is your favourite sport?

Tell me about your favourite sport, if you don't have one research one that you don't know about! What is interesting about your favourite sport? Why do you like it?

Explain the main rules of your favourite sport:

Draw a picture to show me your favourite sport:

Who do you admire that plays this sport?
Can you tell me something about them? Why do you admire them?

The Olympics

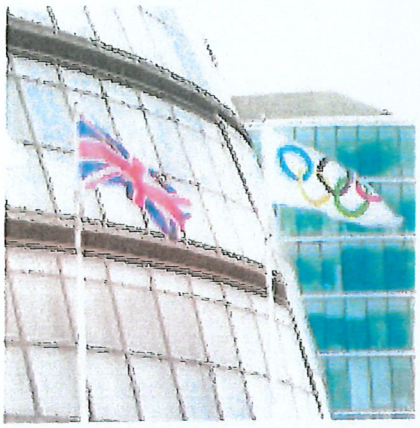
The Olympics began in Ancient Greece and ran every four years from 776BC to at least 393AD. The modern Olympic Games also began in Greece in 1896, taking place in Athens.

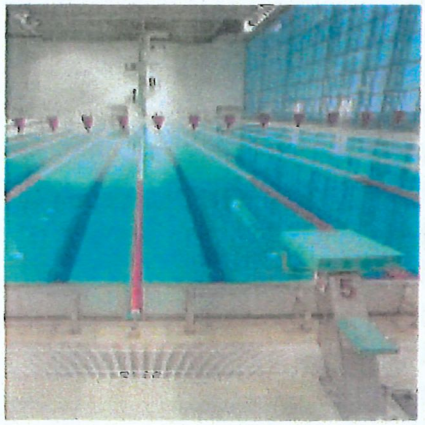
Over 200 nations now compete in the Summer and Winter Olympic Games which are held every four years.

The Paralympic games are also held every 4 years in the same year as the Summer Olympics and have done since 1960.

The five interlocking rings in blue, yellow. Black, green and white are known as the Olympic rings and was created in 1913.

The rings represent all the colours of the flags in the world.





Activity

Imagine that you are a sports journalist for your local paper and have been asked to report on **an amazing day at the Olympic Games.**

Luckily you have a time machine so you can travel to any Winter, Summer or Paralympic Games in either the past or the future.

Write up your article in the box provided – remember to lay it out in a newspaper article format.

Bee-Bot at the Zoo

Bee-Bot is having a lovely day at the Zoo! It is so hot that he has had to stop for an ice cream! But Oh-no! Bee-Bot has lost his map of the Zoo! Can you help him find his way around the animals? Start every activity at the ice cream van and draw the arrows in sequence to build your algorithm.

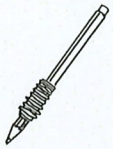
Forwards

Backwards

Left Turn

Right Turn

Go



Visit the Lions

Visit the Pandas

Visit the Tigers and then the Meerkats

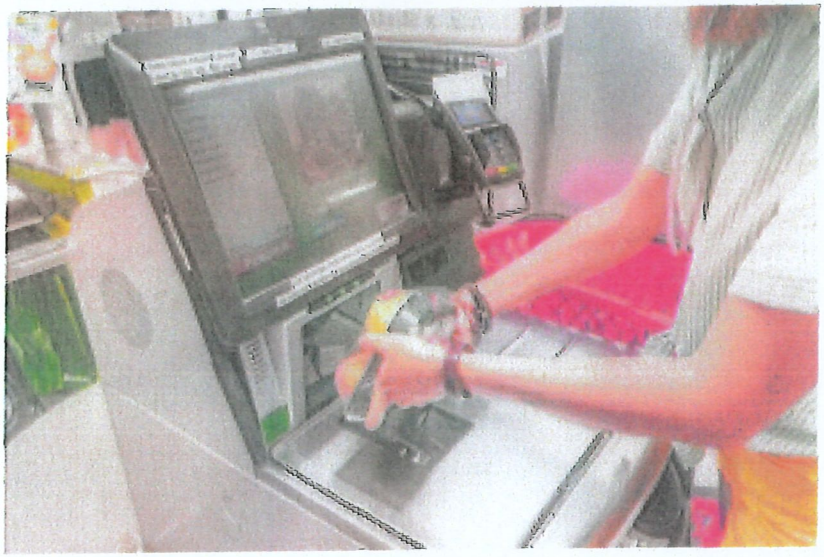
Visit the Polar bears and then the Penguins

Use the cut-out Bee-Bot from the back of the book to help you.

For more computer science activities check out the Bee-Bot and Blue-Bot App

Information Technology all around us!

Information technology is all around us in our everyday lives!



It's in our pockets....

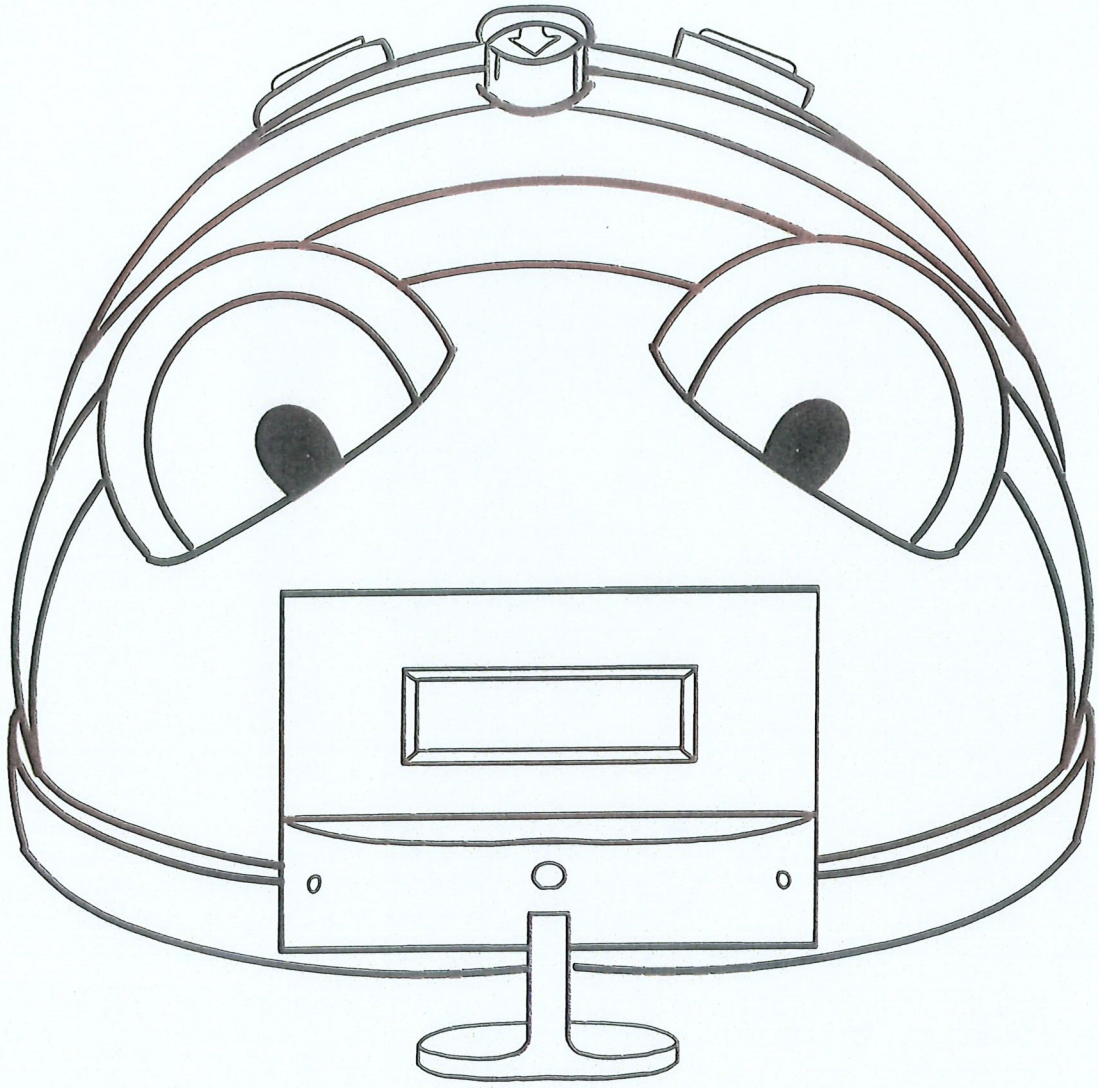
It helps us pay for our food at the supermarket.

We take it on holiday to take photos and record our memories digitally...

What examples of information technology do you have in your house?

Draw and label some of the technology found in your home:

Bee-safety



Bee-Bot loves to use the internet. He loves playing games and watching videos of flower gardens. He knows that to stay safe he should follow some simple rules.

- If he is going online he makes sure that someone knows – like his big brother Blue-Bot.
- He only talks online to people he knows in real life – not strangers.
- If something doesn't seem right or upsets him he lets Blue-Bot know straight away.
- If he needs more information he looks online for more information at **www.thinkuknow.co.uk/**

Create an e-safety poster which could be used in school to help keep your friends safe online: